# PATENT COOPERATION TREATY

# **PCT**

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 03060 UP		FOR FURTHER ACTION		See Form PCT/IPEA/416			
International application No.		International filing date (da	y/month/year)	Priority date (day/month/year)			
PCT/EP2004/012507		05.11.2004		06.11.2003			
International Patent Classification	on (IPC) or natio	onal classification and IPC					
C21 C7/00, C21	в5/02,	C21 B5/00					
Applicant SACHTLEBEN CHEMIE GMBH							
<ol> <li>This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</li> </ol>							
2. This REPORT consist	s of a total of	5	sheets, including	this cover sheet.			
3. This report is also acco	ompanied by AN	NNEXES, comprising:					
a. (sent to the	e applicant and t	to the International Bureau)	a total of 2	sheets, as follows:			
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).							
sheet	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental						
Box.			,				
b. sent to the	: International B	Bureau only) a total of (indic	ate type and number	of electronic carrier(s))			
				, containing a sequence listing and/or tables			
	related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).						
4. This report contains in	dications relatin	ng to the following items:					
Box No. I	Basis of the	report					
Box No. II	Priority						
Box No. III	Non-establis	hment of opinion with regar	d to novelty, inventi	ve step and industrial applicability			
Box No. IV	Lack of unit	y of invention					
Box No. V							
Box No. VI	Box No. VI Certain documents cited						
Box No. VII	Box No. VII Certain defects in the international application						
Box No. VIII	Box No. VIII Certain observations on the international application						
Date of submission of the dema	nd	Date	of completion of thi	s report			
Name and mailing address of the IPEA/EP			orized officer				
Facsimile No.			ohone No.				

# INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/012507

Box	No. I	[	Basis of the report				
1.		_	to the language, this report is based on the internation der this item.	nal application in the language in	which it was filed, unless otherwise		
	This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:						
		<u></u> Ц і	nternational search (Rule 12.3 and 23.1(b))				
		H P	publication of the international application (Rule 12.4)	)			
			nternational preliminary examination (Rule 55.2 and/				
2.	With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):						
		the inte	ernational application as originally filed/furnished				
	$\bowtie$	the des	scription:				
		pages	1-5		as originally filed/furnished		
		pages*	·	received by this Authority on			
		pages*		received by this Authority on			
	$\boxtimes$	the clai	ims:				
		nos.			as originally filed/furnished		
		nos.*		as amended (togethe	r with any statement) under Article 19		
		nos.*	1-9	received by this Authority on	01.09.2005 with letter of 01.09.2005		
		nos.*		received by this Authority on			
		the dra	wings:				
		sheets			as originally filed/furnished		
		sheets*	•	received by this Authority on			
		sheets*					
		a seque	ence listing and/or any related table(s) – see Supplement				
3.		The an	nendments have resulted in the cancellation of:				
			he description, pages				
			he claims, nos.				
			he drawings, sheets/figs				
			he sequence listing (specify):				
		Па	any table(s) related to sequence listing (specify):				
4.	$\boxtimes$		eport has been established as if (some of) the amend ave been considered to go beyond the disclosure as fil				
			he description, pages		·		
		M t	he claims, nos 4,7-9				
			he drawings, sheets/figs				
			he sequence listing (specify):				
			any table(s) related to sequence listing (specify):				
*	If ite	ет 4 арр	lies, some or all of those sheets may be marked "supe	erseded."	<del></del> -		

#### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box			dicle 35(2) with regard to novelty, inventive step or industrial applicability; poorting such statement	
1.	Statement			
	Novelty (N)	Claims	2, 6	YES
		Claims	1, 3-5	NO
	Inventive step (IS)	Claims		YES
		Claims	2, 6	NO
	Industrial applicability (IA)	Claims	1-6	YES
		Claims		NO

- 2. Citations and explanations (Rule 70.7)
  - 1. Prior art

D1: US-A-5 554 207

D2: US-A-4 362 559

D3: DE 101 32 843 A

### 2. Amendments

The amendments to claims 4 and 7 to 9 go beyond the disclosure in the application as originally filed, because the formation of titanium carbides, titanium nitrides and/or titanium carbonitrides is only disclosed in connection with certain additives. The amendments thus constitute a generalisation, which is not permissible, and have therefore been disregarded (PCT Rule 70.2(c)).

Moreover, claims 7 to 9 relate to inventions in respect of which no international search report has been established. For this reason too, these claims cannot be examined (PCT Rule 66.1(e)).

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 3. Novelty

The features of claims 1, 3, 4 and 5 are already known from the prior art documents D1, D2 and D3. The features of claim 3 are regarded as implicitly disclosed together with the other features.

Document D3 relates to a method for conditioning dust particles, more particularly filter dust particles, and to a method for manufacturing metal. The dust particles which are to be conditioned are introduced into an extruder (12) together with a binder in a predefined mixing ratio. The dust particles are mixed with the binder in the extruder (12) to form a plastic material. After mixing, the plastic material is moulded into shaped elements. The binder is melted in the extruder (12) and the dust particles are then added to the molten binder. Before the moulding stage the plastic material in the extruder (12) is cooled, preferably to a temperature in the range between 50 and 250°C. Alloying and/or slag-forming ingredients may also be added for steelmaking purposes. The proportion of dust particles in the plastic material is between 5 and 95%, and the binder is a thermoplastic and/or thermosetting material or an artificial or natural resin or plastic waste material (see claims 1 to 9, 13 to 16, the abstract, and column 3, lines 1 to 6).

It is generally known that thermosetting materials contain nitrogen. It is also noted that dust particles produced in steel manufacturing, as in D3, contain (among other things) FeO,  $SiO_2$ , CaO, MgO,  $Al_2O_3$  and  $TiO_2$ .

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Hence these materials are implicitly disclosed in D3.

Thus all the features of claims 1, 3, 4 and 5 are anticipated by D3.

## 4. Inventive step

The addition of an undefined amount of synthetic titanium dioxide is unlikely to have any technical effect with very small concentrations. Claim 2 therefore does not involve an inventive step.

Injecting additives into liquid melts is a routine procedure. Claim 6 therefore does not involve an inventive step.